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ABSTRACT

A study was conducted to determine if interest in a basal reader story could be heightened and reading comprehension improved by (1) having the children predict the story content from the title prior to reading the story and (2) having them predict the outcome of the story at a salient midpoint. Subjects, 45 children in 2 fifth grade classes, were asked to read 2 stories from a fourth grade book of a basal reader series. A repeated measures design considered three factors: prediction, interest, and comprehension. Analysis of the data indicated a direct relationship between prediction and comprehension, but failed to substantiate the hypothesis that prediction would stimulate interest and that interest would promote comprehension; there was no relationship between interest and comprehension. These results provide support for the practice of having students predict content prior to reading and story outcome at a salient midpoint. (JL)

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Improving the Comprehension of Stories Using Predictive Strategies

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IMPROVING THE COMPREHENSION OF STORIES USING PREDICTIVE STRATEGIES

Introduction

Most elementary teachers must sustain their students' attention to basal readers since school reading programs often center on these materials. It is known that children get more involved in reading if the story plot or chapter topic is interesting to them (Asher, 1980; Estes and Vaughan, 1973). However, students cannot always read in areas of interest when their basal reader series determine topic and sequence. Other approaches must be used to promote their involvement in reading. Among these, prediction is a strategy that is worthy of additional investigation.

The ability to predict relies on prior knowledge and the ability to generate inferences (Rumelhart and Ortony, 1877; Spiro, 1977, 1980). It establishes a general mental set or purpose for reading that primes the reader's thinking. If comprehension is inferential elaboration, then prediction should promote the interaction of thought and text in the process of constructing meaning. If inference leads to selective processing, then recall of information meaningful to an individual reader should be enhanced.

Establishing purpose or mind set for the reading task is supported by Zajonc (1960), Stauffer (1977), and Linden and Wittrock (1982). They suggest that intention in the reading process activates the appropriate schema or conceptual systems for understanding. The act of prediction supports the readers' prior knowledge and leads to their accommodating new information through association. Information that is not congruent with a prediction can be considered without bias,

and judgement about it can be deferred until the facts are known. Inference based on prior knowledge and the reader's expectations leads to the understanding necessary for answering comprehension questions.

Studies of children's interest in the topics of reading passages have tended to identify areas rather than degrees of individuals' interest in a specific story (Asher, 1980). Not surprisingly, most researchers have found that children prefer "high interest" passages over "low interest" passages (Bernstein, 1955; Shnayer, 1969; Estes and Vaughan, 1973; Belloni, 1976; Stevens, 1980). Asher (1980) contends that researchers cannot explain the instructional effects of interest, however, without controlling for the motivation and prior knowledge of the student and the purpose for the reading. Despite the limitations of past studies concerned with the interest factors it has had less of an impact on current teaching and testing practices than it deserves (Estes and Vaughan, 1973).

This study was undertaken to determine if interest in a basal reader story could be heightened and reading comprehension improved by a) having the children predict the story content from the title prior to reading the story and b) having them predict the outcome of the story at a salient midpoint. It was hypothesized that prediction would heighten interest and that increased interest would result in greater story comprehension.

The Study

The subjects for the study were two fifth grade classes, a total of 45 children. The two stories they were asked to read were selected from the fourth grade book of a basal reader series, Time To Wonder (Reference Note 1). Both stories were chosen for the likelihood that the outcome could be guessed at a salient midpoint. Coincidentally, both stories were folk tales, a genre known to the subjects. Neither story was familiar to the readers.

The three factors to be considered were prediction, interest, and comprehension. The study was based on a repeated measures design. Each subject read both stories. In the first class, each subject predicted story content from the title and story outcome at a midpoint for the first story, and did not predict on the second story. In the second class, the prediction sequence was reversed. The first story was read without prediction and the second story included both prediction from the title and at the midpoint. This design was intended to preclude an order effect, as substantiated by the analysis.

The subjects expressed their interest in each story before reading, at the midpoint of the story, and after reading. They were asked to answer ten comprehension questions following each story.

The procedure for data collection was the same for each class with the exception of the reversed order for the prediction factor. After a brief introduction to the task, the examiner elicited a definition of "interest" from class members. Suggestions were written on the board and deletions and modifications were made until a sense

of this concept was established in relation to the task. The Interest Scale to be used in the study was introduced and explained with special attention to the definition of the term "neutral." Although the question preceding the assessment terms varied syntactically, depending on its position in relation to the story, the assessment terms remained unchanged.

Insert Table 1 here

Material packets were distributed and the task began. The first story title was written on the board and predictions about its content were requested by the examiner. Responses were written on the board. The subjects were instructed to open their test booklets. On the first page there was space for them to predict, in writing, the content of the story, using an idea that had been suggested or a new one of their own. The first interest assessment, headed by the question, "How interested are you in reading this story?" followed. The subjects were told to circle the appropriate choice on the Interest Scale.

The subjects read the story to a preselected point where they were asked to predict, in writing, what the outcome of the story would be. The second Interest Scale, headed by the question, "How interested are you in finishing this story?" followed. The subjects completed their reading of the story and answered the Interest Scale, headed by the question, "How interesting did you find this story?" Finally, they responded to the ten open-ended comprehension questions that

followed. The procedure was repeated with the second story except that both predictions were eliminated.

The ten comprehension questions following each story were constructed to assess gist or central meaning as nearly as possible. They were modeled after Anderson's (1972) transformed paraphrase questions in which comprehension can be inferred from the capacity to answer. This type of question minimizes the cueing effect that occurs in verbatim recall questions when question and text share common terminology. Only meaning is shared, not common words. The intent of the questions was to assess the reader's understanding of the behavior of each major story character and the events that resulted from the actions of these characters. Each question was scored on a ten point scale with 100 points as the maximum score possible per story. Criteria had been established for each response, prior to scoring, and point values were assigned to each component of an answer.

Data Analysis

Multiple regression procedures were used to analyze the components of the repeated measures design. Story comprehension was the principle dependent measure with class group (2) as a between subject factor, and treatment condition (2) and stories (2) as within subject factors.

Individual differences in comprehension ability, reflected in the between subjects variance, accounted for 77% of the variance in comprehension scores. Of the remaining within subjects variance only the treatment condition, prediction versus control, accounted for a significant proportion of this variance, 10.3%, $t = 2.73$, $p < .01$.

The mean comprehension scores for the control condition were 55.3 and 54.5 as opposed to 59.4 and 62.5 in the treatment condition, for story one and story two respectively. This treatment effect is graphically displayed in Figure 1.

Insert Figure 1 about here

Analysis of students' interest ratings showed no relationship between treatment conditions and ratings of story interest, or between interest ratings and later performance on the comprehension questions.

Discussion

Analysis of the scores indicate a direct relation between prediction and comprehension. However, the study failed to substantiate that prediction would stimulate interest and that interest would promote comprehension. There was no relationship between interest and comprehension.

The results support the concept that directed thinking or cognitive tuning heighten attention and awareness. As shown in Figure 1, prediction promotes comprehension significantly for both stories in the study across groups.

There is a possibility that the length of the stories and the thickness of the text packet deterred enthusiasm and were reflected in the interest scores. Other factors which may have influenced the results are a) lack of a practice session, b) difference in task demands from the usual classroom routine, and c) the possibility that the subjects did not view the Interest Scales as an integral part

of the procedure. Since oral participation at the outset of each story involving prediction had been active, the examiner did not anticipate the ensuing low interest effects.

Conclusions and Instructional Implications

The results provide support for the practice of predicting story content prior to reading, and story outcome as a salient midpoint, as ways to activate prior knowledge and appropriate schema. Depending on text type, it seems advisable to teach children to predict, then read to confirm their hypotheses or alter them according to text content.

It appears that there would be value in teachers' providing a few minutes of instructional time for making predictions prior to an assignment, to establish the purpose for the students' drawing inferences. Following the reading, then, post assignment discussion could center on a) how the new information has restructured a student's thinking on a subject, b) how the predictions were confirmed or changed, and c) how the story structure led the reader to certain conclusions. Small group interaction, such as that found in the reading group, is ideal for establishing this pattern.

Prediction strategies differ with the intent of the teacher, the student, the material, and the purpose for the instructional task. Over time, the use of this technique with diverse materials could enable students to set their own purposes and to increase their comprehension in varied task types. The technique should increase the students' independence as readers and their flexibility as thinkers.

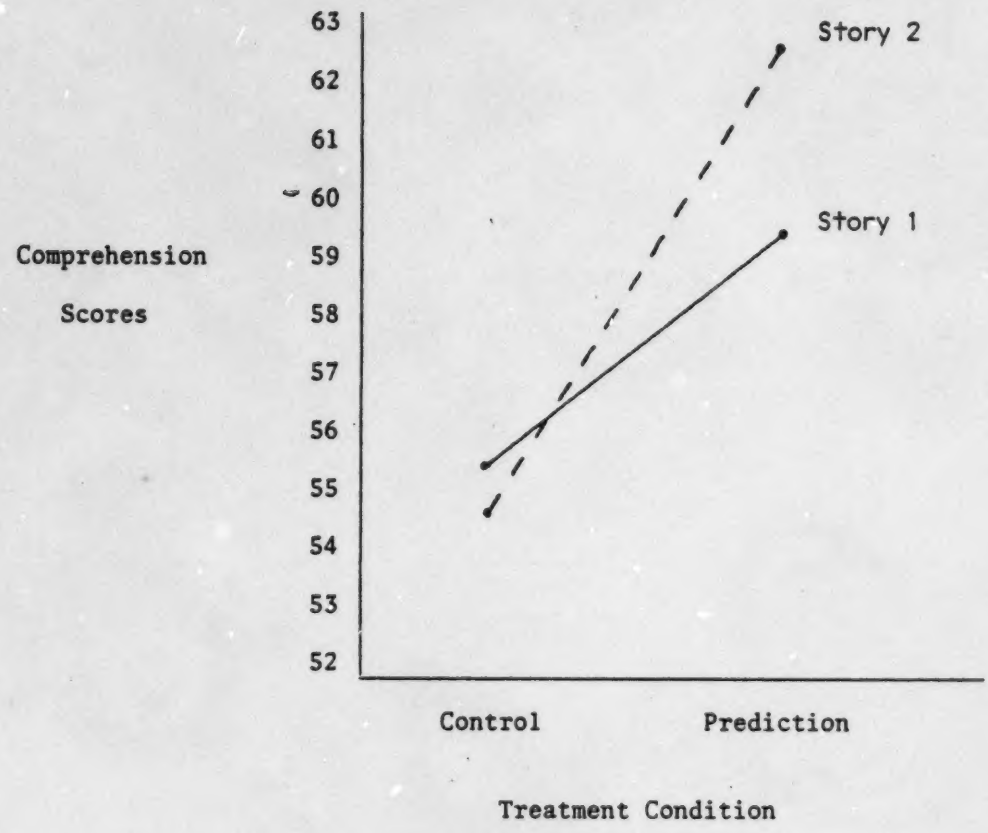
Table 1

Interest Scale

Extremely Interested
Interested
Neutral
Uninterested
Extremely Uninterested

Figure 1

Comprehension Scores as a Function of Prediction



Reference Notes

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